

## CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1        1. (Previously presented) A rate adaptive system for optical  
2 communication networks comprising:

3            a plurality of optical transceivers capable of transmitting and receiving optical  
4 signals at a plurality of rates to each other, and

5            an optical fibre linked to said optical transceivers, said system configured to  
6 cause said optical transceivers to transmit and receive optical signals at an initial rate  
7 and to adapt said initial rate based upon an error condition responsive to an optical  
8 signal parameter by causing said optical transceivers to transmit and receive at a  
9 different rate, wherein a rate of data being forwarded per unit time is adjusted by  
10 inserting invalid data which can be identified and ignored by a downstream process.

1        2. (Previously presented) The system of claim 1, wherein said error  
2 condition is a failure to synchronize a received signal.

1        3. (Previously presented) The system of claim 1, wherein said system  
2 is further configured to calculate an error coefficient based on said received signals,  
3 and said error condition comprise said error coefficient exceeding a predefined range.

1        4. (Previously presented) The system of claim 1, wherein said initial  
2 rate is lowered according to predefined percentages of said initial rate in response to  
3 said error condition.

1        5. (Previously presented) The system of claim 4, wherein said  
2 percentages are selected from the group of 75, 50 and or 25 percent of said initial rate.

1           6. (Previously presented) The system of claim 1, wherein said initial  
2   rate is 10 Gb/s.

1           7. (Previously presented) The system of claim 1, wherein said system  
2   is configured to operate in an optical Ethernet network.

1           8. (Previously presented) The system of claim 1, wherein said system  
2   is further configured to notify a network operator in the event of said error condition.

1           9. (Previously presented) A rate adaptive method for operating an  
2   optical communication network, comprising:

3           transmitting data at an initial rate,  
4           receiving said data at said initial rate,  
5           evaluating said data responsive to a parameter observed on an optical signal to  
6   determine if an error condition exists, and  
7           adapting said rate based upon said evaluation by transmitting and receiving at  
8   a different rate, wherein transmitting and receiving comprises inserting invalid data  
9   which can be identified and ignored by a downstream process.

1           10. (Previously presented) The method of claim 9, wherein adapting  
2   said rate comprises lowering said initial rate according to predefined percentages of  
3   said initial rate in response to said error condition.

1           11. (Previously presented) The method of claim 10, further comprising  
2   notifying a network operator in the event of said error condition.

1           12.-13. (Cancelled)